

Abstract Of the Disclosure

A transducer for a surface acoustic wave (SAW) device comprises a plurality of interdigitized electrode fingers, which change in width along their length. Preferred forms include shapes similar to paired curled brackets {}, paired reversed curled brackets {}, paired rounded brackets (), trapezoids, bells, and rhombus <>. Simultaneously, weighting by shape of the interdigitized electrode fingers is determined using of at least one of the following inventive mechanisms: the SAW velocity dispersion effect along the finger's length and the dispersion of the SAW reflection coefficient along the finger's length. Electrode fingers shaped in form of either paired brackets, rhombus, cascaded brackets or cascaded rhombuses are also utilized for SAW beam diffraction control by focussing of the SAW due to the SAW velocity dispersion effect along the fingers' lengths.